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From: LUCY PARK
Location: EIC2100
RND-4B28 / RND-4B31
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Search Notes

Examiner HAMZA:

Here are the results of your search. I flagged the records that looked most interesting, but please review all of the results.

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Thank you,
Lucy

Lucy Park
NPL/Patent Searcher
EIC 2100

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[File 347] **JAPIO** Dec 1976-2007/Oct(Updated 080129)

**File 347: File Histories now available for ordering when searching via DialogLink 5 and Web products, see HELP FILEHIST for more information.*

[File 350] **Derwent WPIX** 1963-2008/UD=200811

**File 350: Chinese Utility Model registrations in English now available To order File Histories, see HELP FILEHIST for details.*

; d s
Set Items Postings Description
S1 4507348 29269518 S SYSTEM? ? OR NETWORK? ?
S2 235197 1322791 S S1(3N)(ADAPT? OR ADJUST? OR SELFADAPT? OR SELFADJUST? OR MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHANG??? OR CONFIGUR? OR RECONFIGUR? OR ALLOCAT? OR REALLOCAT?)
S3 16025 117147 S S2(5N)(DYNAMIC? OR ON()FLY OR AUTOMAT? OR REAL()TIME)
S4 59879 174433 S CONTRACT? ? OR (SERVICE OR QOS)(2N)AGREEMENT? ? OR SLA OR PROPOSAL? ? OR PACT? ?
S5 740683 5357004 S S1(3N)(COMPONENT? ? OR MEMBER? ? OR DEVICE? ? OR MACHINE? ? OR CLIENT? ? OR SERVER? ? OR COMPUTER? ? OR INTERCOMPONENT?)
S6 13486 101621 S S5(3N)(INTERACT? OR RELATIONSHIP? OR EXCHANG? OR NEGOTIAT? OR INTEROPERAT? OR INTER()OPERAT? OR INTERRELAT?)
S7 107 1959 S S3 AND S4
S8 4 94 S S7 AND S6
S9 53 2197 S S7 AND S5
S10 49 2036 S S9 NOT S8
S11 18 689 S S10 NOT AD=20000601:20080215/PR
S12 18 689 S S11 NOT S8
S13 1325 6365 S S4(3N)(CRITERIA OR TENET? ? OR ELEMENT? ? OR CHARACTERISTIC? ? OR PARAMETER? ? OR SPECS OR SPECIFICATION? ?)
S14 6 85 S S3 AND S13
S15 4 49 S S14 NOT (S8 OR S12)
S16 402633 1319679 S SECURITY OR HACK??? OR CRACK??? OR INTRUD? OR INTRUSION? OR (UNAUTHORIZ? OR UNAUTHORIS? OR MALICIOUS?)(3N)(USE? ? OR ENTRY? OR ACCESS?)
S17 3 69 S S7 AND S16
S18 1 38 S S17 NOT (S8 OR S12 OR S15)

patent abstracts

8/5/1 (Item 1 from file: 350) Links
Fulltext available through: Order File History
Derwent WPIX

0013331159 & & *Drawing available*
WPI Acc no: 2003-418561/200339
XRPX Acc No: N2003-333958
Community communication system e.g. for home control system, uses central server to execute automated communication based on negotiation of exchange contracts between satellite control systems
Patent Assignee: BLATTNER D O (BLAT-I); BLATTNER M M (BLAT-I); KAMEGAI M (KAME-I)
Inventor: BLATTNER D O; BLATTNER M M; KAMEGAI M

Patent Family (1 patents, 1 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20030041107	A1	20030227	US 1999360282	A	19990722	200339	B

Priority Applications (no., kind, date): US 1999360282 A 19990722

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 20030041107	A1	EN	28	15	

Alerting Abstract US A1
NOVELTY - A data transfer module of a central server (300) executes an automated communication based on negotiation of exchange **contracts** between multiple satellite control systems (201) such that one of the satellite control systems revokes or suspends the exchange **contract** in response to the automated communication.
DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

1. method of communication computer system;
2. message distribution system; and
3. method for **facilitating** data **exchange** between **computer systems**.

USE - For providing communication link between individual community systems such as home control systems, office control systems, public utility and service systems and electronic objects in homes, offices, retail establishment, service providers and emergency services for delivering traffic hazards and emergency information to police and weather reports.
ADVANTAGE - The system makes use of intelligent software agents by which individual subscribers can communicate with the central system, thereby providing wide range of functionalities and services at reduced costs.
DESCRIPTION OF DRAWINGS - The figure shows the block diagram of the software architecture of the satellite control system.
201 satellite control systems
300 central server

12/5/1 (Item 1 from file: 350) **Links**
Fulltext available through: Order File History
Derwent WPIX

0015145182 & & *Drawing available*
WPI Acc no: 2005-494755/200550
Related WPI Acc No: 2006-017995
XRPX Acc No: N2005-403326
Recommended committed information rate determining method for frame relay network, has permanent virtual circuit trend analysis report logic that calculates recommendation to change rate of frame relay network to specific value
Patent Assignee: PARADYNE CORP (PDYN)
Inventor: MAWHINNEY T N; SILVA R; SWIFT L

Patent Family (1 patents, 1 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 6912575	B1	20050628	US 1999338812	A	19990623	200550	B

Priority Applications (no., kind, date): US 1999338812 A 19990623

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 6912575	B1	EN	17	5	

Alerting Abstract US B1
NOVELTY - The system has a permanent virtual circuit trend analysis report logic retrieving historical information and tolerance information from a database. The tolerance and historical information are analyzed. The logic calculates a recommendation to change a committed information rate (CIR) of a frame relay network to a specific value based on the analysis. The analysis and the recommendation are displayed to a user.
DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

4. a method for automatically assessing the data transmission performance of the **network**
5. a **computer** readable **medium** having a program **for** automatically assessing the data transmission performance of the network.

USE - Used for determining a recommended committed information rate (CIR) in a frame relay network.
ADVANTAGE - The system automatically analyzes the historical information and the **recommend adjustment** to a **network** service parameter. The **system automatically** determines whether **the** frame relay network performs **at** a level agreed upon in a **service** level **agreement (SLA)**. The system automatically determines **whether** the **CIR needs** to be increased based on an actual performance on the network. The system automatically recommends a specific amount of increase or decrease in the CIR. The system automatically predicts when the recommendation for a specific amount of increase or decrease in the CIR will be needed.
DESCRIPTION OF DRAWINGS - The drawing shows a flow diagram illustrating an operation of a permanent virtual circuit (PVC) trend analysis report logic.

12/5/3 (Item 3 from file: 350) **Links**
Fulltext available through: Order File History
Derwent WPIX

0013561498 *& & Drawing available*
WPI Acc no: 2003-655676/200362
XRPX Acc No: N2003-522121
Service level agreement request method for cable television network, involves initializing network device with configuration file by setting parameters for class-of-service for desired service level agreement
Patent Assignee: 3COM CORP (THRE-N)
Inventor: BUDINGER D M; FIJOLEK J G; GILBERT I M; JAIN N; ROBINSON P T

Patent Family (1 patents, 1 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 6553568	B1	20030422	US 1999407337	A	19990929	200362	B

Priority Applications (no., kind, date): US 1999407337 A 19990929

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 6553568	B1	EN	27	11	

Alerting Abstract US B1
NOVELTY - A statically reserved network address is transmitted to a **network device** including a cable modem (CM) from a cable modem termination system (CMTS), when the **network device** requests a desired **service** level **agreement** during a boot sequence. The configuration files are loaded for initializing the **network device**, by setting several parameters for class-of-service or quality-of-**service** for desired **agreement**.
DESCRIPTION - An INDEPENDENT CLAIM is also included for computer readable medium storing **service** level **agreement** requesting program.
USE - For requesting **service** level **agreement** in data-over-cable system e.g. cable television network. Also applicable for data-over-cable system with and without telephony return for providing access routing for asynchronous transfer mode (ATM), asymmetric digital subscriber lines (ADSL), voice over internet protocol (VoIP).
ADVANTAGE - Allows **service** level **agreements** to be used on data-over-cable system without adversely affecting performance of throughput on the data-over-cable system.
DESCRIPTION OF DRAWINGS - The figure shows a flowchart explaining **service** level **agreement** requesting method.

12/5/5 (Item 5 from file: 350) **Links**
Fulltext available through: Order File History
Derwent WPIX

0010913740 & & *Drawing available*
WPI Acc no: 2001-535065/200159
Related WPI Acc No: 2000-015558; 2002-526793
XRPX Acc No: N2001-397236
Network management method involves identifying group view and network projects which have poor status based on respective indicators for displaying corresponding message
Patent Assignee: HEWLETT-PACKARD CO (HEWP)
Inventor: RICHARDSON D E

Patent Family (1 patents, 1 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 6271845	B1	20010807	US 199887338	A	19980529	200159	B
			US 2000523387	A	20000310		

Priority Applications (no., kind, date): US 199887338 A 19980529; US 2000523387 A 20000310

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 6271845	B1	EN	19	13	C-I-P of application	US 199887338
					C-I-P of patent	US 6054987

Alerting Abstract US B1
NOVELTY - The characteristics of each network object of the group view which consists of status indicator are defined, monitored and stored in a file. Several containers corresponding to the group views are displayed. The containers and the network objects consists of respective status indicators based on which the group views and network objects identified to have poor status are sequentially indicated.
USE - For monitoring the status of **network components** such as personal computers, work-stations, servers, routers, bridges, print servers, etc., also electronic-mail (e-mail) browsers, **service** level **agreements**, etc., using simple network management protocol and common management information protocol.
ADVANTAGE - The message is indicating the fault conditions are displayed in detail for immediate correction by the administrator before the users are affected.
DESCRIPTION OF DRAWINGS - The figure explains editing of group view information.

12/5/6 (Item 6 from file: 350) **Links**
Fulltext available through: Order File History
Derwent WPIX

0010884102 & & *Drawing available*
WPI Acc no: 2001-504179/200156
XRPX Acc No: N2001-374015
Management of e.g. internet and telephone services over communication network, involves mapping service requirement information onto model of communication network to determine relation between the requirement and network
Patent Assignee: NORTEL NETWORKS LTD (NELE)
Inventor: CROSS S; CROSS S C; SHORE M; SHORE M M

Patent Family (2 patents, 27 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 1111840	A2	20010627	EP 2000310448	A	20001124	200156	B
CA 2327833	A1	20010622	CA 2327833	A	20001206	200156	E

Priority Applications (no., kind, date): GB 199930427 A 19991222; US 2000541186 A 20000403

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
EP 1111840	A2	EN	50	31		
Regional Designated States,Original	AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
CA 2327833	A1	EN				

Alerting Abstract EP A2
NOVELTY - The information about service requirements through an user interface is received and stored using pre-specified representation. Some of the information is mapped onto a model of communication network and the relationship between service requirements and communication network (10), is determined. The services are managed based on the determined relationship.
DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

6. Service management system for managing services provided over communication **network**;
7. Communication **network**;
H. Computer program to control service **management system**

USE - For managing multiple services such as internet service, telephone services over a communication network.
ADVANTAGE - As the information from **service** level **agreement** is represented using a pre-specified representation **and** is **used** to manage more services, a service provider is enabled to manage services efficiently and to take into account information from **service** level **agreements** quickly and easily. As the services of **different** classes **and service** requirements vary according to service class, a service provider is enabled to manage services such as premium rate and best effort services in efficient and effective manner.
DESCRIPTION OF DRAWINGS - The figure shows the schematic diagram of connectionless communication network.
10 Communication network

12/5/8 (Item 8 from file: 350) **Links**
Fulltext available through: Order File History
Derwent WPIX

0010766698 & & *Drawing available*
WPI Acc no: 2001-380804/200140
XRPX Acc No: N2001-279217
Computer network business process oriented enterprise software system includes process agencies and proxy agents which dynamically collaborate to monitor and manage business process during its life cycle
Patent Assignee: EXTERPRISE INC (EXTE-N)
Inventor: BANDEREDDI P E; MEHTA V O; RANA S P

Patent Family (2 patents, 25 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2001006352	A2	20010125	WO 2000US19132	A	20000713	200140	B
EP 1203292	A2	20020508	EP 2000945373	A	20000713	200238	E
			WO 2000US19132	A	20000713		

Priority Applications (no., kind, date): US 1999352086 A 19990714

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 2001006352	A2	EN	53	7		
Regional Designated States,Original	AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
EP 1203292	A2	EN			PCT Application	WO 2000US19132
					Based on OPI patent	WO 2001006352
Regional Designated States,Original	AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					

Alerting Abstract WO A2
NOVELTY - The system has multiple process agencies and proxy agents. The agencies and agents are dynamically collaborated to manage the business process during its life [illegible] invoke and manage operation of any one associated sub-process using [illegible] ess participant knowledge and meta processes.
DESCRIPTION - The agencies each invoke and manage opera [illegible] rocess into roles. Each process agency uses process participant knowl [illegible] les to perform each associated sub-process and to monitor status of d [illegible] a processes to monitor and dynamically reconfigure the corresp [illegible] iated sub-processes, if necessary. Multiple proxy agents each repres [illegible] aintain participant capabilities and availability. Each proxy agent negot [illegible] determine role assignments for corresponding participant and m [illegible] manages status of any roles performed by participant in any one or more of the sub-processes.
USE - For use in business organizations.
ADVANTAGE - Allows active entities to be defined that serve as proxies for persons in the system and provides dynamic and configurable interfaces for their owners. Allows for integration of end-to-end service level objectives and ensures that these objectives are achieved at the process or at service execution level. Allows users to capture business process concepts and business participants models directly into the systems as **adaptive, dynamic** and active entities that can change and evolve as changes occur in the business processes, participant behavior, and business process environment. Meta processes are incorporated to monitor measure, change and evolve business processes implemented by the system.

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F41

12/5/12 (Item 12 from file: 350) **Links**
Fulltext available through: Order File History
Derwent WPIX

0009227411 & & *Drawing available*
WPI Acc no: 1999-154026/199913
XRPX Acc No: N1999-110992
Optimal task allocation system
Patent Assignee: BUSINESSBOTS INC (BUSI-N)
Inventor: LESSER V R; SANDHOLM T W

Patent Family (2 patents, 79 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1999006932	A1	19990211	WO 1998US15728	A	19980729	199913	B
AU 199886009	A	19990222	AU 199886009	A	19980729	199927	E

Priority Applications (no., kind, date): US 1997904880 A 19970801

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 1999006932	A1	EN	24	4		
National Designated States,Original	AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW					
Regional Designated States,Original	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
AU 199886009	A	EN			Based on OPI patent	WO 1999006932

Alerting Abstract WO A1
NOVELTY - Individually rational agents (re)-**contract** tasks among themselves based on marginal costs and a task allocation graph is introduced as a tool for analyzing **contract** types. Traditional single task **contracts** always have a short path to the optimal task allocation but an individually rational path may not exist or may be short. The shortest individually rational path is found using an algorithm
USE - Contracting protocols for automatic negotiations that can be implemented in connection with **computer network**
ADVANTAGE - Achieving optimal or at least improved task allocation among agents
DESCRIPTION OF DRAWINGS - The drawing shows an example of a multi agent **contract** involving three agents that can be used in connection with some embodiments of present invention.
302 Agent 1 tasks
304 Agent 2 tasks
306 Agent 3 tasks

12/5/14 (Item 14 from file: 350) **Links**
Fulltext available through: Order File History
Derwent WPIX

0008906906 & & *Drawing available*
WPI Acc no: 1998-456655/199839
XRPX Acc No: N1998-356405
Dynamic interface production system for host computer database and remote system - has event contract interface sub-system which receives messages from event trigger module
Patent Assignee: BELL COMMUNICATIONS RES INC (BELL-N)
Inventor: DORIS D J; SOLAR D J

Patent Family (1 patents, 1 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 5794053	A	19980811	US 1994245313	A	19940518	199839	B
			US 1996681234	A	19960722		

Priority Applications (no., kind, date): US 1994245313 A 19940518; US 1996681234 A 19960722

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 5794053	A	EN	13	8	Continuation of application	US 1994245313

Alerting Abstract US A
The system (12) includes an event table subsystem (16) which has an input unit to associate external system field names with the field names of host system as interface condition definition. The input unit defines events in terms of dynamic and static conditions. A definition database stores tables of events, field names and interface conditions. An event trigger subsystem (20) connected to host database, comprises a clue module (24) containing user defined tags associated with dynamic conditions. The changes in host database is analysed to identify dynamic conditions that indicate an occurrence of event.
An event **contract** interface subsystem (18) interposed between other subsystems, receives messages from event trigger module when an event occurs. The received messages are analysed for static and dynamic conditions to determine whether event actually occurred. Then, an interface condition tag value pair message is created and send to external systems (14) based on interface **contract** definition from definition database.
ADVANTAGE - Allows conditions to be set by user. Allows user to generically define events. Avoids modification of interface condition code.

12/5/15 (Item 15 from file: 350) **Links**
Fulltext available through: Order File History
Derwent WPIX

0008841065 & & *Drawing available*
WPI Acc no: 1998-387487/199833
XRPX Acc No: N1998-302215
Network configuration management system for digital communication network e.g. video dial tone network - has contract system which assigns identified logical assignments to provisioned logical assignments so as to provide specific infrastructure option between specified locations
Patent Assignee: BELL ATLANTIC NETWORK SERVICES (BELL-N)
Inventor: CURTIS D C; CURTIS K P; DENUNZIO D D; REED W P; WOLAK R A

Patent Family (1 patents, 1 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 5774689	A	19980630	US 1995532314	A	19950922	199833	B

Priority Applications (no., kind, date): US 1995532314 A 19950922

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 5774689	A	EN	29	12	

Alerting Abstract US A
The system includes a library which identifies relationship between first, second and third group of objects. The first group of objects represent respective parameters of an infrastructure component. The second group of objects represent respective characteristics of an infrastructure option. The third group of objects represent the available physical connections for connecting several infrastructure components in a specified pattern. Based on the identified relationship a logical configuration for each of the infrastructure components, is chosen. Parameters with corresponding connection sequences are also selected for obtaining a particular infrastructure option. A model system creates provisioning models which identify infrastructure components performing respective infrastructure option.
The provisioning models comprise first and second handoff objects which identify first and second connection of corresponding provisioning model. A location object identifies a path of the corresponding provision model. The model system comprises a routing algorithm for assembling a sequence of provisioning models. A minimum of one path model is provided to supply the corresponding infrastructure options between specified locations. An inventory system identifies logical assignments from the library, for providing infrastructure options in accordance with the provisioning models and provisioned logical assignments. A **contract** system assigns the identified logical assignments to the provisioned logical assignments so as to provide a specific infrastructure option between specified locations.
ADVANTAGE - Improves network transport capacity. Improves flexibility.

[File 348] **EUROPEAN PATENTS** 1978-2007/ 200807
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*File 348: For IPCR/8 information, see HELP NEWSIPCR. To order File Histories, see HELP FILEHIST for details.

[File 349] **PCT FULLTEXT** 1979-2008/UB=20080131UT=20080124
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;d s
Set Items Postings Description
S1 1777806 44531450 S SYSTEM? ? OR NETWORK? ?
S2 270164 2005807 S S1(3N)(ADAPT? OR ADJUST? OR SELFADAPT? OR SELFADJUST? OR MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHANG??? OR CONFIGUR? OR RECONFIGUR? OR ALLOCAT? OR REALLOCAT?)
S3 18109 108292 S S2(5N)(DYNAMIC? OR ON()FLY OR AUTOMAT? OR REAL()TIME)
S4 103469 384065 S CONTRACT? ? OR (SERVICE OR QOS)(2N)AGREEMENT? ? OR SLA OR PROPOSAL? ? OR PACT? ?
S5 420965 6842194 S S1(3N)(COMPONENT? ? OR MEMBER? ? OR DEVICE? ? OR MACHINE? ? OR CLIENT? ? OR SERVER? ? OR COMPUTER? ? OR INTERCOMPONENT?)
S6 16713 109186 S S5(3N)(INTERACT? OR RELATIONSHIP? OR EXCHANG? OR NEGOTIAT? OR INTEROPERAT? OR INTER()OPERAT? OR INTERRELAT?)
S7 249 1899 S S3(100N)S4
S8 5 41 S S7(100N)S6
S9 79 1002 S S7(100N)S5
S10 74 869 S S9 NOT S8
S11 38 486 S S10 NOT AD=20000601:20080215/PR
S12 20 359 S S11 AND IC=G06F
S13 2837 13176 S S4(3N)(CRITERIA OR TENET? ? OR ELEMENT? ? OR CHARACTERISTIC? ? OR PARAMETER? ? OR SPECS OR SPECIFICATION? ?)
S14 3 20 S S3(50N)S13
S15 13 95 S S3(100N)S13
S16 11 76 S S15 NOT (S8 OR S12)
S17 1 5 S S16 NOT AD=20000601:20080215/PR
S18 227666 1888285 S SECURITY OR HACK??? OR CRACK??? OR INTRUD? OR INTRUSION? OR (UNAUTHORIZ? OR UNAUTHORIS? OR MALICIOUS?)(3N)(USE? ? OR ENTRY? OR ACCESS?)
S19 13 148 S S7(100N)S18
S20 2 19 S S19 NOT (S8 OR S12 OR S17)
S21 34 262 S S3(10N)S4
S22 23 180 S S21 NOT (S8 OR S12 OR S17 OR S20)
S23 7 50 S S22 NOT AD=20000601:20080215/PR

full-text patents

12/3K/3 (Item 3 from file: 348) Links
Fulltext available through: Order File History
EUROPEAN PATENTS

01088204
SYSTEM AND METHOD FOR OPTIMIZING PERFORMANCE MONITORING OF COMPLEX INFORMATION TECHNOLOGY SYSTEMS
SYSTEM UND VERFAHREN ZUR OPTIMIERUNG DER LEISTUNGSKONTROLLE VON KOMPLEXEN INFORMATIONSTECHNOLOGIESYSTEMEN
SYSTEME ET PROCEDE D'OPTIMISATION DU CONTROLE DE PERFORMANCES DE SYSTEMES COMPLEXES DE TECHNIQUES DE L'INFORMATION

Patent Assignee:

9. **Perot Systems Corporation**; (2841660)
12404 Park Central Drive; Dallas, TX 75251; (US)
(Proprietor designated states: all).

Inventor:

10. **ADRIAANS, Pieter, Willem**
Portengen 34a; NL-3628 EE Kockengen; (NL)

11. **KNOBBE, Arno, Jan**
Het Rond 60; NL-3995 DL Houten; (NL)

12. **GATHIER, Marc**
Kribbemonde 123; NL-3434 KZ Nieuwegein; (NL)

Legal Representative:

13. **O'Connell, David Christopher et al (62551)**
HASELTINE LAKE, Redcliff Quay 120 Redcliff Street; Bristol BS1 6HU; (GB)

	Country	Number	Kind	Date	
Patent	EP	1058886	A1	20001213	(Basic)
	EP	1058886	B1	20050126	
	WO	1999045468		19990910	
Application	EP	99911148		19990304	
	WO	99US4885		19990304	
Priorities	US	36393		19980306	

Designated States:
AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;
GR; IE; IT; LI; LU; MC; NL; PT; SE;

International Patent Class (V7): G06F-011/34; G06F-011/34
NOTE: No A-document published by EPO

Type	Pub. Date	Kind	Text

Publication: English
Procedural: English
Application: English

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200504	1965
CLAIMS B	(German)	200504	1754
CLAIMS B	(French)	200504	2277

SPEC B	(English)	200504	7619
Total Word Count (Document A) 0			
Total Word Count (Document B) 13615			
Total Word Count (All Documents) 13615			

Claims: ...decision tree having a multiplicity of decision nodes, each said decision node corresponding to a **component** of said **system** ;

(g) comparing a plurality of relationships within said system between said system performance data and... ...said nodes, whereby said modification iteratively optimises said performance monitoring of said system; and

(i) **automatically** updating an **adaptive system** model according to newly discovered relationships.

2. The method according to claim 1, wherein said... ...monitoring and collecting, the step of:

generating a test program pursuant to at least one **service** level **agreement**, said plurality of nodes for monitoring and performance data collection being selected pursuant to said at least one **service** level **agreement**.

4. The method according to claim 3, wherein said test program targets a target **component** within said **system**, said target **component** being selected from the group consisting of a system hardware resource and a system software... ...to claim 4, wherein said target component targeted by said test program is an underperforming **system component**, whereby said step of modifying modifies said steps of continuously monitoring and collecting said performance data on said underperforming **system component**.

7. The method according to claim 1, wherein said step of modifying modifies the periodicity... ...decision tree having a multiplicity of decision nodes, each said decision node corresponding to a **component** of said **system** ;

comparison means for comparing a plurality of relationships within said system between said system performance... ...for the continuous monitoring and collection, respectively, of said performance data; and

updating means for **automatically** updating an **adaptive system** model according to newly discovered relationships.

29. The system according to claim 28, wherein said... ...comprises:

test program generation means for generating a test program pursuant to at least one **service** level **agreement**.

30. The system according to claim 29, wherein said test program targets a target **component** within said **system**.

31. The system according to claim 30, wherein said target component substantially corresponds to a...

12/3K/7 (Item 7 from file: 348) Links
Fulltext available through: Order File History
EUROPEAN PATENTS

00365885
Dynamic load balancing for multi-user computers.
Dynamische Lastabgleichung fur Multibenutzerrechner.
Equilibrage dynamique de charge pour des ordinateurs a multi-utilisateurs.

Patent Assignee:

14. **DEMAX SOFTWARE, INC**; (1111120)
999 Baker Way, Suite 500; San Mateo California 94404; (US)
(applicant designated states: AT;BE;CH;DE;ES;FR;GB;GR;IT;LI;LU;NL;SE)

Inventor:

15. **Esbensen, Daniel Mark**
4075-10 Carmel View; San Diego California 92130; (US)

Legal Representative:

16. **Cookson, Barbara Elizabeth et al (50341)**
WITHERS & ROGERS 4 Dyer's Buildings Holborn; London EC1N 2JT; (GB)

	Country	Number	Kind	Date	
Patent	EP	346039	A2	19891213	(Basic)
Application	EP	89305636		19890605	
Priorities	US	203227		19880606	

Designated States:
AT; BE; CH; DE; ES; FR; GB; GR; IT; LI;
LU; NL; SE;

International Patent Class (V7): G06F-009/46; ; ; G06F-009/46Abstract Word Count: 149

Type	Pub. Date	Kind	Text

Publication: English
Procedural: English
Application: English

Available Text	Language	Update	Word Count
CLAIMS A	(English)		753
SPEC A	(English)		9632
Total Word Count (Document A) 10385			
Total Word Count (Document B) 0			
Total Word Count (All Documents) 10385			

Specification: ...is needed is a method and apparatus for monitoring the performance of a multi-user **computer system** under a variety of loading and processing conditions, and for making dynamic adjustments to both... ...must not overwrite any portion of the basic operating system which would jeopardize warranty or **service contract agreements** on large multi-user systems. SUMMARY

In view of the above problems in the art, one purpose of the present invention is to provide a method of **dynamically adjusting system** control parameters in a multi- user or multi-process computer to optimize utilization of computer... ...user or process.

An advantage of the present invention is that the resources of the **computer system** are **automatically adjusted** at periodic intervals to accommodate even highly dynamic load conditions.

12/3K/8 (Item 1 from file: 349) Links
Fulltext available through: Order File History
PCT FULLTEXT

00828025
MULTIPLE MANAGEMENT SYSTEM AND METHOD
SYSTEME DE GESTION MULTIPLE ET PROCEDE

Patent Applicant/Patent Assignee:

17. **CEDERE CORPORATION**; 38 Westech Drive, Tyngsboro, MA 01879 US; US(Residence); US(Nationality)
(For all designated states except: US)

18. **KRYSKOW Joseph M Jr**; 148 Wason Road, Hudson, NH 03051 US; US(Residence); US(Nationality)
(Designated only for: US)

Patent Applicant/Inventor:

19. **KRYSKOW Joseph M Jr**
148 Wason Road, Hudson, NH 03051; US; US(Residence); US(Nationality); (Designated only for: US)

Legal Representative:

20. **FRESSOLA Alfred A(agent)**
Ware, Fressola, Van Der Sluys & Adolphson LLP, Building Five, Bradford Green, 755 Main Street, P.O. Box 224, Monroe, CT 06468; US;

	Country	Number	Kind	Date
Patent	WO	200161564	A1	20010823
Application	WO	2001US4873		20010216
Priorities	US	2000183695		20000218

Designated States: (All protection types applied unless otherwise stated - for applications 2004+)

[EP] AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; TR;

[OA] BF; BJ; CF; CG; CI; CM; GA; GN; GW; ML; MR; NE; SN; TD; TG;

[AP] GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZW;

[EA] AM; AZ; BY; KG; KZ; MD; RU; TJ; TM;

bad date?
FYI

Main International Patent Classes (Version 7):

IPC	
G06F-017/30	Main

Publication Language: English
Filing Language: English
Fulltext word count: 3271

English Abstract:

...system environment, where network bandwidth (84) and service types are provided by one or more **service** level **agreements** (SLAs) by monitoring multiple **components** of the **network** so as to identify the current status of multiple **service** level **agreements** (88); by determining the current scale and scope of the **network**; and by **automatically adjusting** a **service** level **agreement** based on the current scale and scope of the network in view of the status of multiple **service** level **agreements**.

Detailed Description:

...unique report for that specific customer's data which identifies the key parameters being measured.

Service level **agreement** for that customer.

Management and network state (e.g., if there is any available management... ...access lists, passwords, and configured filters for specific information types.

Thus, as a customer's **SLA changes**, the **system automatically** distributes the appropriate changes to the management control system identifying the changed "data" to which... ...any one network management system. In order to accomplish this task, the method monitors multiple **components** within the **network** in order to automatically characterize and measure multiple
2
service level **agreement** parameters. By monitoring these parameters, infonnation with respect to the network service providers, and network... ...key component of the method is to have specific configuration information for accessing each section/**component** of the **network** as supplied by the proprietor of that component. The automatic nature of the invention is...situations in
which the network load is greater than a predetermined percentage for a
specific **network component** (such as a specific network element or application) in which case no further management control is allowed. Another example is
a **service** level **agreement** which is changed **automatically** and the **change**
requires that **network** providers have access to additional specific management products associated with the user network and specific...

Claims:

...management system environment, where network bandwidth and service types are provided by one or more **service** level **agreements** (SLAs), comprising the steps of1) monitoring multiple **components** of the **network** so as to identify the current status
of multiple **service** level **agreements**;2) determining the current scale and scope of the **network**; and3) **automatically adjusting** a **service** level **agreement** based on the current scale andscope of the network in view of the status of the multiple **service** level**agreements**.
2 A method of automatically identifying and setting the level of management access privilege that...

12/3K/19 (Item 12 from file: 349) Links
Fulltext available through: Order File History
PCT FULLTEXT

00439358
SYSTEMS AND METHODS FOR FACILITATING THE EXCHANGE OF INFORMATION BETWEEN SEPARATE BUSINESS ENTITIES
SYSTEMES ET PROCEDES FACILITANT L'ECHANGE D'INFORMATIONS ENTRE DES ENTREPRISES SEPAREES

Patent Applicant/Patent Assignee:

21. **BUILDNET INC**;
;;

22. **BROWN Keith T**;
;;

23. **BROWN Philip B**;
;;

24. **WADDELL J William**;
;;

25. **ANDRE Jeffrey J**;
;;

	Country	Number	Kind	Date
Patent	WO	9829822	A1	19980709
Application	WO	97US23740		19971231
Priorities	US	96775276		19961231

Designated States: (All protection types applied unless otherwise stated - for applications 2004+)

Main International Patent Classes (Version 7):

IPC	Level
G06F-017/60	Main

Detailed Description:

...schedule or a supplier's schedule
or both. The present invention also facilitates
rescinding a **contract** between a fabricator and a supplier
when the rescinded contract does ...a
variety of industries and is not limited to the home
building industry

A preferred **computer network system** for
carrying out methods of synchronizing a fabrication
schedule with a plurality of supplier schedules,
according to the present invention, is a **dynamic system**
wherein schedule **changes** made by a **network member** ripple
down to all **network members** and are automatically
integrated within the schedule of each respective **network**

member as appropriate. For example, if rain delays the framing of a house, the lumber yard... ...terminals in communication with a central data processing system

Referring now to Fig. 1, a **computer network system** 10 for synchronizing schedules and facilitating

the flow of information between ...

23/3K/5 (Item 5 from file: 348) Links
Fulltext available through: Order File History
EUROPEAN PATENTS

01294995

A method of managing one or more services over a communications network
Verfahren zur Verwaltung einer oder mehrerer Dienstleistungen uber ein Kommunikationsnetzwerk
Une methode de gestion d'un ou plusieurs services a travers un reseau de communication

Patent Assignee:

26. **Nortel Networks Limited**; (3029042)
2351 Boulevard Alfred-Nobel; St. Laurent, Quebec H4S 2A9; (CA)
(Applicant designated States: all)

Inventor:

27. **Cross, Stephen**
34 Calvery Close; Bishops Stortford, Herts. CM23 4JJ; (GB)

28. **Shore, Mark**
9 Wells Close; Whitchurch, Bristol BS14 0PD; (GB)

Legal Representative:

29. **Anderson, Angela et al (78507)**
Nortel Networks IP Law Group, Harlow Laboratories, London Road; Harlow, Essex CM17 9NA; (GB)

	Country	Number	Kind	Date	
Patent	EP	1111840	A2	20010627	(Basic)
	EP	1111840	A3	20040204	
Application	EP	2000310448		20001124	
Priorities	US	541186		20000403	
	GB	9930427		19991222	

Designated States:
DE; ES; FR; GB;

Extended Designated States:
AL; LT; LV; MK; RO; SI;

International Patent Class (V7): H04L-012/24**Abstract** ...agreements; to automatically generate configuration details to enable services provided on the network to meet **SLA** commitments; and to **automatically configure** operations support **systems** , such as fault and performance monitoring systems.

Abstract Word Count: 182
NOTE: 1
NOTE: Figure number on first page: 1

Type	Pub. Date	Kind	Text

Publication: English
Procedural: English
Application: English

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200126	737
SPEC A	(English)	200126	13810
Total Word Count (Document A) 14547			

Total Word Count (Document B) 0
Total Word Count (All Documents) 14547

Specification: ...agreements and to define new classes of service. Other examples included assisting with negotiation of **service** level **agreements** and enabling **network configuration** details to be **automatically** generated in order to meet **service** level **agreements**. Another example is that of **automatically configuring** operational support **systems** such as performance and fault monitoring systems in order that they take account of service...

[File 2] **INSPEC** 1898-2008/Jan W2

[File 6] **NTIS** 1964-2008/Feb W3

[File 8] **Ei Compendex(R)** 1884-2008/Jan W4

[File 23] **CSA Technology Research Database** 1963-2008/Jan

[File 34] **SciSearch(R) Cited Ref Sci** 1990-2008/Feb W3

[File 35] **Dissertation Abs Online** 1861-2007/Oct

[File 65] **Inside Conferences** 1993-2008/Feb 15

[File 95] **TEME-Technology & Management** 1989-2008/Feb W1

[File 99] **Wilson Appl. Sci & Tech Abs** 1983-2008/Jan

[File 111] **TGG Natl.Newspaper Index(SM)** 1979-2008/Jan 29

[File 144] **Pascal** 1973-2008/Feb W1

[File 256] **TecInfoSource** 82-2008/Dec

[File 266] **FEDRIP** 2007/Nov

[File 434] **SciSearch(R) Cited Ref Sci** 1974-1989/Dec

[File 239] **Mathsci** 1940-2008/Feb

[File 474] **New York Times Abs** 1969-2008/Feb 14

[File 475] **Wall Street Journal Abs** 1973-2008/Feb 14

[File 583] **Gale Group Globalbase(TM)** 1986-2002/Dec 13

**File 583: This file is no longer updating as of 12-13-2002.*

;d s
Set Items Postings Description
S1 20581778 54127286 S SYSTEM? ? OR NETWORK? ?

S2 656408 1841822 S S1(3N)(ADAPT? OR ADJUST? OR SELFADAPT? OR SELFADJUST? OR MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHANG??? OR CONFIGUR? OR RECONFIGUR? OR ALLOCAT? OR REALLOCAT?)
S3 52826 205920 S S2(5N)(DYNAMIC? OR ON()FLY OR AUTOMAT? OR REAL()TIME)
S4 1343383 2553238 S CONTRACT? ? OR (SERVICE OR QOS)(2N)AGREEMENT? ? OR SLA OR PROPOSAL? ? OR PACT? ?
S5 1829246 5435582 S S1(3N)(COMPONENT? ? OR MEMBER? ? OR DEVICE? ? OR MACHINE? ? OR CLIENT? ? OR SERVER? ? OR COMPUTER? ? OR INTERCOMPONENT?)
S6 50770 196909 S S5(3N)(INTERACT? OR RELATIONSHIP? OR EXCHANG? OR NEGOTIAT? OR INTEROPERAT? OR INTER()OPERAT? OR INTERRELAT?)
S7 699 3779 S S3 AND S4
S8 5 56 S S7 AND S6
S9 4 46 RD (unique items)
S10 170 1515 S S7 AND S5
S11 144 1278 RD (unique items)
S12 61 528 S S11 NOT PY=2001:2008
S13 46732 202138 S S4(3N)(CRITERIA OR TENET? ? OR ELEMENT? ? OR CHARACTERISTIC? ? OR PARAMETER? ? OR SPECS OR SPECIFICATION? ?)
S14 20 131 S S3 AND S13
S15 13 82 RD (unique items)
S16 3 18 S S15 NOT PY=2001:2008
S17 1655437 4721710 S SECURITY OR HACK??? OR CRACK??? OR INTRUD? OR INTRUSION? OR (UNAUTHORIZ? OR UNAUTHORIS? OR MALICIOUS?)(3N)(USE? ? OR ENTRY? OR ACCESS?)
S18 51 402 S S7 AND S17
S19 39 313 RD (unique items)
S20 24 190 S S19 NOT PY=2001:2008
S21 24 190 S S20 NOT (S9 OR S16)
S22 55 473 S S12 NOT (S9 OR S16 OR S21)

9/5/1 (Item 1 from file: 8) **Links**
Ei Compendex(R)

07905855 **E.I. No:** EIP98013999745
Title: Adaptive scheduler for multimedia systems

Author: Carchiolo, Vincenza; Malgeri, Michele
Corporate Source: Universita di Catania, Catania, Italy
Conference Title: Proceedings of the 1997 6th IEEE Workshop on Future Trends of Distributed Computing Systems
Conference Location: Tunis, Tunisia **Conference Date:** 19971029-19971031
Sponsor: IEEE
E.I. Conference No.: 47583
Source: Proceedings of the IEEE Computer Society Workshop on Future Trends of Distributed Computing Systems 1997. IEEE Comp Soc, Los Alamitos, CA, USA,97TB100190. p 324-329
Publication Year: 1997
CODEN: 002155
Language: English
Document Type: CA; (Conference Article) **Treatment:** A; (Applications); T; (Theoretical)
Journal Announcement: 9803W1
Abstract: The problem connected with multimedia system deals mainly in software management of host systems. The need to guarantee the execution of the tasks involved in multimedia makes the RTOS the correct environment into which work. But the peculiarities of multimedia task need some modification mainly in scheduling algorithms. A **proposal** of one scheduling algorithms is presented in this paper. (Author abstract) 5 Refs.
Descriptors: *Distributed computer systems; Software engineering; **Real time systems**; **Adaptive** algorithms; **Interactive computer systems**
Identifiers: Multimedia systems
Classification Codes:
722.4 (Digital Computers & Systems); 723.1 (Computer Programming)
722 (Computer Hardware); 723 (Computer Software)
72 (COMPUTERS & DATA PROCESSING)

9/5/2 (Item 1 from file: 23) **Links**
Fulltext available through: STIC Full Text Retrieval Options
CSA Technology Research Database

0008112200 IP Accession No: 200705-94-054488

PROQOS-Dynamic SLA Management in DiffServ Space Links

Pessoa, Manuel; Alves, Antonio; Quadros, Goncalo; Boavida, Fernando; Henke, Michael; Natcheva, Milva; Halke, Patrick; Maurutschek, Peter; Huskic, Zenon ; Wagner, Kurt; Zeppenfeldt, Frank; Donadio, Roberto Critical Software SA, Coimbra, Portugal
Author Email: boavida@dei.uc.pt
Journal of Network and Systems Management , v 12 , n 4 , p 441-461 , Dec. 2004
Publication Date: 2004
Publisher: Kluwer , 101 Philip Drive , Norwell , MA , 02061
Country Of Publication: USA
Publisher Url: http://www.wkap.nl/
Publisher Email: Angela.depina@wkap.com

Document Type: Journal Article
Record Type: Abstract
Language: English
ISSN: 1064-7570
DOI: 10.1007/s10922-004-0671-6
File Segment: Computer & Information Systems Abstracts

Abstract:
Several base elements for the provision of quality of service guarantees have been developed in the recent past. Of these, the Differentiated Services (DiffServ) architecture stands out as the most promising. In spite of this, various issues remain, especially when multidomain DiffServ services are concerned. In this case, some forms of distributed management of **Service** Level **Agreements** that allow the specification, exchange, enforcement and monitoring of quality of service data must be in place. Although, again, some isolated solutions exist for each of these problems, considerable effort is necessary to make them work together. The project presented in this paper tried to assess the feasibility of providing differentiated quality of service in satellite IP networks, by developing a dynamic **Service** Level **Agreement** management solution for an IP over Digital Video Broadcast Satellite system. The functionality of the implemented **system** comprises **system configuration, dynamic SLA** negotiation, QoS monitoring and metering, **SLA** conformance checking, and QoS reporting to customers.

Descriptors: Dynamical systems; Dynamics; Management; IP (Internet Protocol); Satellites ; Monitoring; **Negotiations**; **Computer programs**; **Networks**; Architecture; Metering; Links; Software; Dynamic tests; Customers; Stands; Specifications; Feasibility; Supports; Broadcasting
Subj Catg: 94, Management of Computing and Information Systems

bad date,
but FYI

9/5/3 (Item 1 from file: 35) Links
Dissertation Abs Online

01631863 ORDER NO: AAD98-23865

DYNAMIC QUALITY-OF-SERVICE FRAMEWORK FOR VIDEO IN BROADBAND NETWORKS (MULTIMEDIA)

Author: REININGER, DANIEL J.
Degree: PH.D.
Year: 1998
Corporate Source/Institution: RUTGERS THE STATE UNIVERSITY OF NEW JERSEY - NEW BRUNSWICK (0190)
Director: JOSEPH Y. HUI
Source: Volume 5902B of Dissertations Abstracts International.
PAGE 804 . 149 PAGES
Descriptors: ENGINEERING, ELECTRONICS AND ELECTRICAL ; COMPUTER SCIENCE
Descriptor Codes: 0544; 0984

A dynamic framework for quality-of-service (QoS) control of video applications is presented. The framework allows flexible, robust and efficient video delivery with application-level QoS support. Key components of the framework are: client QoS renegotiation, server source rate control and **dynamic network** bandwidth **allocation**. The coordinated functionality of these distributed components provides soft-QoS to adaptive applications. A new transport model, called $VBR\sp+$, supports renegotiation of bandwidth and soft-QoS between the server and the network during the session. A soft-QoS controller, at each **network** node, **dynamically allocates** bandwidth to connections. The research combines theoretical and experimental work leading to the framework's performance evaluation. Results show that: (1) bandwidth renegotiation significantly improves the quality of variable bit-rate (VBR) compressed video, (2) network capacity can effectively be doubled while providing soft-QoS, (3) soft-QoS control is robust to network load and gracefully degrades application-level performance during congestion, (4) signaling load and network processing requirements are controllable, and can be reasonably supported within the capabilities of the new generation broadband network nodes, (5) at moderate loads, a market-based model can be used to implement a distributed soft-QoS controller and to tariff bandwidth usage according to users' valuations.

Finally, a proof-of-concept prototype of a video browser with user-level control of soft-QoS is implemented within the proposed framework. The implementation uses a distributed software architecture that represents soft-QoS requirements by software objects, called service **contracts**. These objects are **exchanged** among **servers**, **network** nodes, and **clients** to achieve distributed soft-QoS control. Experiences with the proto-type and its performance are discussed.

16/5/2 (Item 1 from file: 95) **Links**
Fulltext available through: STIC Full Text Retrieval Options
TEME-Technology & Management

01092171 I97047106254
Taking advantage of ATM services and tariffs: the importance of transport layer dynamic rate adaptation

(Die Vorteile der ATM-Dienste und -Tarife - die Wichtigkeit der Anpassung der Tranportschicht-Dynamikgeschwindigkeit)
Schulz, K-J; Incollingo, M; Uhrig, HK
Eur. Space Agency, Paris, France
IEEE Network, v11, n2, pp10-17 , 1997
Document type: journal article **Language:** English
Record type: Abstract
ISSN: 0890-8044

Abstract:
Modern network services provided by frame relay (FR) or asynchronous transfer mode (ATM) networks show a wide variety of service characteristics and related quality of service, which amounts to a tremendous diversity of tariff structures. One of the network provider's objectives is to maximize the chargeable utilization of the network. This is intended to be achieved by a traffic contract on a per-connection basis. The network service user's interest is, of course, to minimize the cost for usage of the service. This can be achieved by traffic-contract-conformant behavior. In order to avoid (chargeable) injection of data that will be lost due to congestion in the network, the user has to adapt to the congestion state of the network by interpreting the congestion information provided by the network service. If the network user is logically mapped to the lowest end-to-end layer (i.e., the transport layer), the adaptive behavior has to be realized by adaptive rate control in this layer. This article analyzes the upcoming network services and their tariffs, demonstrates the advantage of rate control by a congestion avoidance algorithm, and the applicability of this concept to the telemetry and scientific data distribution applications of the European Space Agency (ESA).

Descriptors: ADAPTIVE CONTROL; DATA COMMUNICATION; TARIFFS; COMMUNICATION NETWORKS; COMMUNICATION SERVICES; COMMUNICATION TRAFFIC; INFORMATION TRANSMISSION; ASYNCHRONOUS OPERATION; SATELLITE COMMUNICATION; REMOTE MEASUREMENT; TELECOMMUNICATION TECHNIQUE; SERVICE; QUALITY; CONTRACTS; EUROPE; SCIENCE; FIRMS AND INSTITUTIONS; DATA SIGNALLING RATE; TRAFFIC JAM; ALGORITHM; USERS ; ASYNCHRONOUS TRANSFER MODE; CONGESTION CONTROL--TELECOMMUNICATION; ASYNCHRONOUS TRANSFER MODE NETWORKS; QOS--QUALITY OF SERVICE
Identifiers: FRAME RELAY; SATELLITE TELEMETRY; ATM SERVICES; ATM TARIFFS; **DYNAMIC** RATE **ADAPTATION**; **NETWORK** SERVICES; SERVICE **CHARACTERISTICS**; NETWORK PROVIDER; TRAFFIC **CONTRACT**; TRANSPORT LAYER; TRAFFIC CONTRACT CONFORMANT BEHAVIOR; PER CONNECTION TRAFFIC CONTRACT; ADAPTIVE RATE CONTROL; CONGESTION AVOIDANCE ALGORITHM; SCIENTIFIC DATA DISTRIBUTION; TELEMETRY DATA DISTRIBUTION; EUROPEAN SPACE AGENCY; ESA; TRANSPORTSCHICHT; NETZDIENST; TARIFSTRUKTUR; DATENVERTEILUNG; Nachrichtennetz; Netzdienst; Tarif

21/5/6 (Item 1 from file: 8) Links
Ei Compendex(R)

08108811 **E.I. No:** EIP98084355704
Title: Proceedings of the 1998 17th Annual ACM Symposium on Principles of Distributed Computing

Author: Anon (Ed.)
Conference Title: Proceedings of the 1998 17th Annual ACM Symposium on Principles of Distributed Computing
Conference Location: Puerto Vallarta, Mexico **Conference Date:** 19980628-19980702
Sponsor: ACM
E.I. Conference No.: 48876
Source: Proceedings of the Annual ACM Symposium on Principles of Distributed Computing 1998. ACM, New York, NY, USA. 323p
Publication Year: 1998
CODEN: 85LRAZ
Language: English
Document Type: CP; (Conference Proceedings) **Treatment:** A; (Applications); G; (General Review); T; (Theoretical)
Journal Announcement: 9810W4
Abstract: The proceedings contains 30 papers from the 17th Annual ACM Symposium on Principles of Distributed Computing. Topics discussed include: compact routing schemes; reconsidering fragmentation; **dynamic** bandwidth **allocations**; balancing **networks** resolved; asynchronous group mutual exclusions; SCRAMNet systems; private multiparty computations; database private information retrievals; fast-track multiparty computations; threshold cryptography; optimistic **contract** signing; asynchronous message-passing models; round-by-round fault detectors; message classification models; fault-tolerant concurrent programs; universal constructions; randomized synchronous consensus; and dynamic view-oriented group communication services.
Descriptors: *Distributed computer systems; Data communication systems; Routers; Internet; Storage allocation (computer); Adaptive algorithms; Concurrency control; **Security** of data; Data privacy; Electronic document identification systems
Identifiers: Pivot interval routing (PIR); Low stretch factors; Transfer control protocols (TCP); Dynamic bandwidth allocations; Quality of service (QoS); Counting networks; Balancing networks; Asynchronous group mutual exclusions ; Shared-memory models; EiRev
Classification Codes:
722.4 (Digital Computers & Systems); 722.3 (Data Communication, Equipment & Techniques); 722.1 (Data Storage, Equipment & Techniques); 723.2 (Data Processing); 723.5 (Computer Applications)
722 (Computer Hardware); 723 (Computer Software)
72 (COMPUTERS & DATA PROCESSING)

21/5/9 (Item 1 from file: 35) **Links**
Dissertation Abs Online

01704496 ORDER NO: AAD99-29347

DYNAMIC MANAGEMENT OF COMPUTATION AND COMMUNICATION RESOURCES TO ENABLE SECURE HIGH-PERFORMANCE APPLICATIONS (DYNAMIC RESOURCE ALLOCATION, ADAPTIVE SECURITY, RISK ASSESSMENT, INTERNET)

Author: SCHNECK, PHYLLIS ADELE
Degree: PH.D.
Year: 1998
Corporate Source/Institution: GEORGIA INSTITUTE OF TECHNOLOGY (0078)
Advisor: KARSTEN SCHWAN
Source: Volume 6005B of Dissertations Abstracts International.
PAGE 2218 . 225 PAGES
Descriptors: COMPUTER SCIENCE
Descriptor Codes: 0984

Current Internet usage for commercial applications is increasing exponentially. Electronic commerce trends are demanding greater **security** for network-enabled collaboration as well as business transactions that use Virtual Private Networks (public networks supporting communication between private hosts). **Security** measures are also necessary to enable applications for network rating standards, law enforcement, air traffic control, and wireless communications. Thus, the growth of commercial electronic communication demands a growth in **security** provision. Augmenting traditional data transport with **security** measures performed at end hosts can potentially degrade the performance of networked applications, creating an inherent **security** vs. performance tradeoff.

This thesis addresses this tradeoff by adapting to current system loads and **security** requirements to provide adaptive **security** through dynamic resource allocation. This work targets multi-stream, networked collaborative applications running on heterogeneous, unstructured distributed computing platforms that resemble subsections of the Internet. The goal is to minimize **security** risk by enabling CPU and network resources to be available and dynamically applied to **security** operations as needed for application streams to vary their **security** levels.

As the demand for network-based applications grows, the instances of changes in end-host connection requirements increase. Systems must have the capability to **dynamically** adapt **security** provision to **changing** requirements of hosts, **networks**, and applications. To address this need, this thesis presents a framework which incorporates admission control and run-time adaptive methods for per-stream **security** resource **contracts** within which these issues are addressed. This work comprises the following contributions: (1) formulation of new metrics to quantify performance and **security**; (2) formulation of rational mapping of user-requested **security** level to CPU resources; (3) formulation of heuristics for dynamically altering **security** level based on current resource allocation (patent pending); (4) formulation of the concept of risk as it applies to adaptive **security**; (5) formulation of joint optimization of computation resources for overall risk minimization; and (6) application of the mapping of **security** level to CPU and network resources to enable: (a) global tracking of resource availabilities of all registered end-hosts, (b) criticality-based risk management, and (c) on-line global optimization to minimize “exposure” for a system of multiple application connections between multiple hosts.

see patent, attached

US006865426B1

(12) **United States Patent**
Schneck et al.

(10) **Patent No.: US 6,865,426 B1**
(45) **Date of Patent: *Mar. 8, 2005**

(54) **ADAPTIVE DATA SECURITY SYSTEMS AND METHODS**

(75) Inventors: **Phyllis A. Schneck**, Atlanta, GA (US); **Karsten Schwan**, Tucker, GA (US); **Santosh Chokhani**, Arlington, VA (US)

(73) Assignee: **Georgia Tech Research Corporation**, Atlanta, GA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **09/514,119**

(22) Filed: **Feb. 28, 2000**

Related U.S. Application Data

(60) Provisional application No. 60/063,551, filed on Oct. 28, 1997.

(51) **Int. Cl.**[7] **G05B 15/02**; G05B 19/18

(52) **U.S. Cl.** **700/9**; 700/7; 700/8; 700/67; 700/68; 709/213; 709/229; 709/230; 713/186; 713/187; 713/188; 713/201; 370/246; 370/352; 370/389

(58) **Field of Search** 713/201, 164, 713/165, 151, 166, 200; 700/9

(56) **References Cited**

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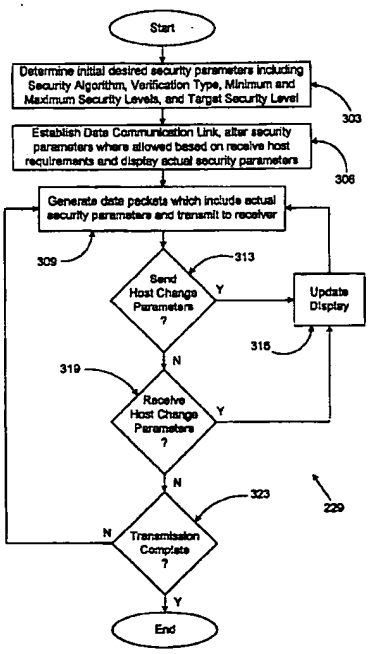
Primary Examiner—Ayaz Sheikh
Assistant Examiner—Kaveh Abrishamkar
(74) *Attorney, Agent, or Firm*—Thomas, Kayden, Horstemeyer, & Risley

(57) **ABSTRACT**

The present disclosure relates to a method for communicating and applying adaptive security to a data stream comprising a plurality of data packets. The method comprises the steps of identifying a desired security level range and a desired actual security level which falls within the desired security level range. The availability of a number of security processor operations at the host is determined so that, if needed, computing resources at the host can be reallocated to ensure that the data stream can be verified at the desired actual security level. If there are not sufficient resources available for reallocation at the host, communication resources can be reallocated, for example by changing the bandwidth of the data stream or another incoming data stream. With this method, the actual security level will be kept within the desired security level range.

31 Claims, 13 Drawing Sheets



program can be electronically captured, via for instance optical scanning of the paper or other medium, then compiled, interpreted or otherwise processed in a suitable manner if necessary, and then stored in a computer memory.

Many variations and modifications may be made to the above-described embodiment(s) of the invention without departing substantially from the spirit and principles of the invention. All such modifications and variations are intended to be included herein within the scope of the present invention.

We claim:

1. A method for applying adaptive security to a data stream, comprising the steps of:

identifying a desired security level range and a desired actual security level which falls within the desired security level range for communicating a data stream from a send host to a receive host;

determining an actual security level in the receive host based upon the availability of a number of security processor operations;

communicating the actual security level from the receive host to the send host;

generating a plurality of data packets associated with the data stream in the send host, the data packets having an authentication header including the desired security level range and the actual security level;

reallocating computing resources at the receive host if data packets cannot be verified at the desired actual security level with a current allocation of resources; and

verifying the data packets at the actual security level, the actual security level being within the desired security level range.

2. The method of claim 1, further comprising the step of altering the actual security level in the send host using a security level thermostat.

3. The method of claim 1, wherein the step of reallocating computing resources at the receive host comprises identifying the availability of a number of security operations per second (SOPS) employed in non-critical operations at the receive host and reallocating these SOPS for processing the data stream.

4. The method of claim 1, further comprising the step of determining the bandwidth of the data stream being sent from the send host to the receive host.

5. The method of claim 4, further comprising the step of reallocating communication resources if there are insufficient computing resources available for reallocation at the receive host.

6. The method of claim 5, wherein the step of reallocating communication resources comprises adjusting the bandwidth of the data stream.

7. The method of claim 6, further comprising the step of identifying the number of security operations per second (SOPS) that will be required to process the data stream and comparing this number with the number of SOPS available at the receive host to determine the amount of bandwidth adjustment needed.

8. The method of claim 6, wherein the bandwidth is adjusted by decreasing data transmission rate.

9. The method of claim 6, wherein the bandwidth is adjusted by increasing a data portion of the data packets to lower a security:message ratio of the data packets.

10. The method of claim 6, further comprising the step of calibrating the computing resources with the communication resources.

11. A method for communicating and applying adaptive security to a data stream comprising a plurality of data packets, comprising the steps of:

identifying a desired security level range and a desired actual security level which falls within the desired security level range for the data stream to be received by a host;

determining the availability of a number of security processor operations at the host;

reallocating computing resources at the host if the data stream cannot be verified at the desired actual security level;

reallocating communication resources if there are insufficient computing resources available for reallocation at the host; and

verifying the data packets at the actual security level, the actual security level being within the desired security level range.

12. The method of claim 11, wherein the step of reallocating computing resources at the host comprises identifying the availability of a number of security operations per second (SOPS) employed in non-critical operations at the host and reallocating these SOPS for processing the data stream.

13. The method of claim 11, wherein the step of reallocating communication resources comprises adjusting the bandwidth of the data stream.

14. The method of claim 13, further comprising the step of identifying the number of security operations per second (SOPS) that will be required to process the data stream and comparing this number with the number of SOPS available at the receive host to determine the amount of bandwidth adjustment needed.

15. The method of claim 13, wherein the bandwidth is adjusted by decreasing data transmission rate.

16. The method of claim 13, wherein the bandwidth is adjusted by increasing a data portion of the data packets to lower a security:message ratio of the data packets.

17. The method of claim 11, further comprising the step of calibrating the computing resources with the communication resources.

18. A system for facilitating data communication to a host with adaptive security, comprising:

means for determining whether a desired actual security level for a transmitted data stream falls within a desired security level range;

means for determining the availability of a number of security processor operations at the host;

means for reallocating computing resources at the host if the data stream cannot be verified at the desired actual security level; and

means for reallocating communication resources if there are insufficient computing resources available for reallocation at the host.

19. The system of claim 18, wherein the means for determining the availability of a number of security processor operations comprises means for determining a processor time availability by examining a resource tracking table for a non-critical processor time usage of at least one existing data stream.

20. The system of claim 18, wherein the means for determining the availability of a number of security processor operations comprises means for identifying the availability of a number of security operations per second (SOPS) employed in non-critical operations at the host and reallocating these SOPS for processing the data stream.

21. The system of claim 18, wherein the means for reallocating communication resources comprises means for adjusting the bandwidth of the data stream.

22. The system of claim 21, wherein the means for adjusting the bandwidth of the data stream comprises means for decreasing the data transmission rate.

23. The system of claim 21, wherein the means for adjusting the bandwidth of the data stream comprises means for increasing a data portion of data packets of the data stream to lower a security:message ratio of the data packets.

24. The system of claim 18, further comprising means for calibrating the computing resources with the communication resources.

25. A computer program embodied on a computer-readable medium for facilitating data communication to a host with adaptive security, comprising:

logic configured to determine whether a desired actual security level for a transmitted data stream falls within a desired security level range;

logic configured to determine the availability of a number of security processor operations at the host;

logic configured to reallocate computing resources at the host if the data stream cannot be verified at the desired actual security level; and logic configured to reallocate communication resources if there are insufficient computing resources available for reallocation at the host.

26. The computer program of claim 25, wherein the logic configured to determine the availability of a number of security processor operations comprises logic configured to determine a processor time availability by examining a resource tracking table for a non-critical processor time usage of at least one existing data stream.

27. The computer program of claim 25, wherein the logic configured to determine the availability of a number of security processor operations comprises logic configured to identify the availability of a number of security operations per second (SOPS) employed in non-critical operations at the host and reallocate these SOPS available for processing the data stream.

28. The computer program of claim 25, wherein the logic configured to reallocate communication resources comprises logic configured to adjust the bandwidth of the data stream.

29. The computer program of claim 28, wherein the logic configured to adjust the bandwidth of the data stream comprises logic configured to decrease the data transmission rate.

30. The computer program of claim 28, wherein the logic configured to adjust the bandwidth of the data stream comprises logic configured to increase a data portion of data packets of the data stream to lower a security:message ratio of the data packets.

31. The computer program of claim 25, further comprising logic configured to calibrate the computing resources with the communication resources.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,865,426 B1
DATED : March 8, 2005
INVENTOR(S) : Phyllis A. Schneck et al.

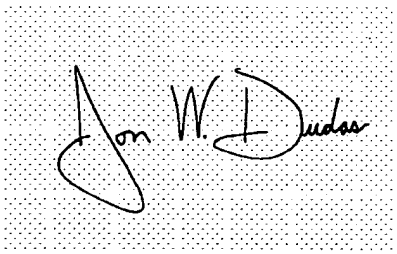
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page,

Item [63], **Related U.S. Application Data**, please add -- Continuation of application No. 09/181,304, filed on Oct. 28, 1998, now Pat. No. 6,108,583. --

Signed and Sealed this

Twenty-eighth Day of June, 2005



JON W. DUDAS
Director of the United States Patent and Trademark Office

22/5/2 (Item 2 from file: 2) **Links**
INSPEC

06392572 **INSPEC Abstract Number:** B9611-6210R-055, C9611-6130M-020
Title: A quality of service negotiation procedure for distributed multimedia presentational applications
Author Hafid, A.; von Bochmann, G.; Kerherve, B.
Author Affiliation: Dept. d'Inf. et de Recherche Oper., Montreal Univ., Que., Canada
Conference Title: Proceedings of the Fifth IEEE International Symposium on High Performance Distributed Computing (Cat. No.TB100069) p. 330-9
Publisher: IEEE Comput. Soc. Press , Los Alamitos, CA, USA
Publication Date: 1996 **Country of Publication:** USA xviii+642 pp.
ISBN: 0 8186 7582 9 **Material Identity Number:** XX96-02423
U.S. Copyright Clearance Center Code: 1082-8907/96/$5.00
Conference Title: Proceedings of 5th IEEE International Symposium on High Performance Distributed Computing
Conference Sponsor: IEEE Comput. Soc. Tech. Committee on Distributed Process.; Northeast Parallel Architectures Center; New York State Center for Adv. Technol. Comput. Applications & Software Eng. (CASE Center) at Syracuse Univ.; Rome Lab
Conference Date: 6-9 Aug. 1996 **Conference Location:** Syracuse, NY, USA

Language: English **Document Type:** Conference Paper (PA)
Treatment: Practical (P)
Abstract: Most current approaches in designing and implementing distributed multimedia (MM) presentational applications have concentrated on the performance of the continuous media file servers in terms of seek-time overhead and real-time disk scheduling; particularly, the quality of service (QoS) negotiation mechanisms they provide are used in a rather static manner, i.e. these mechanisms are restricted to the evaluation of the capacity of certain **system components**. In contrast to those approaches, we propose a general QoS negotiation framework that supports the **dynamic** choice of a configuration of **system components** to support the QoS requirements of the user of a specific application: we consider different possible system configurations and select an optimal one to provide the appropriate QoS support. We document the design and implementation of a QoS negotiation procedure for distributed MM presentational applications, such as news-on-demand. The negotiation procedure described is an instantiation of the general framework for QoS negotiation. Our **proposal** differs in many respect with the negotiation functions provided by existing approaches: (1) the negotiation process uses an optimization approach to find a configuration of **system components** which supports the user requirements, (2) the negotiation process supports the negotiation of a MM document and not only a single monomedia object, (3) the QoS negotiation takes into account the cost to the user; (4) the negotiation process may be used to support automatic adaptation to react to QoS degradations, without intervention by the user/application. (19 Refs)
Subfile: B C
Descriptors: distributed processing; file servers; information services; multimedia systems; negotiation support systems; optimisation; quality control
Identifiers: service quality negotiation procedure; distributed multimedia presentational applications; **dynamic system configuration** choice; user requirements; news-on-demand; optimization approach; monomedia object; user cost; automatic adaptation; quality degradations
Class Codes: B6210R (Multimedia communications); B0260 (Optimisation techniques); C6130M (Multimedia); C6150N (Distributed systems software); C6160S (Spatial and pictorial databases); C1180 (Optimisation techniques); C7210 (Information services and centres)

22/5/19 (Item 3 from file: 8) **Links**
Fulltext available through: STIC Full Text Retrieval Options
Ei Compendex(R)

08431609 **E.I. No:** EIP99124935998
Title: Network traffic shaping technique based on waiting time

Author: Katsinis, C.; Volz, A.
Corporate Source: Drexel Univ, Philadelphia, PA, USA
Source: International Journal of Computers and Applications v 21 n 2 1999. p 44-49
Publication Year: 1999
CODEN: IJCAFW **ISSN:** 1206-212X
Language: English
Document Type: JA; (Journal Article) **Treatment:** T; (Theoretical); X; (Experimental)
Journal Announcement: 0001W4
Abstract: A **network** communications switch which **changes** the service characteristics (bandwidth) **dynamically** to accommodate variations in packet waiting time is described. This analysis is applicable to data communications such as ATM, which is an example of B-ISDN that multiplexes many users of any bit rate up to the high-speed trunk rate. A method of traffic control is presented that allows bandwidth allocation based on the waiting time of the packets (cells). The output buffer of a network switch is modelled by investigating the characteristics of the stationary waiting time process using an imbedded Markov chain. The resulting steady state equations are solved by means of theoretical, numerical, and simulation techniques. The primary focus of this analysis is on bursty arrivals modelled by the hyperexponential distribution and a service distribution which is a function of the cell waiting time. (Author abstract) 11 Refs.
Descriptors: *Data communication systems; Telecommunication traffic; Congestion control (communication); Asynchronous transfer mode; Queueing networks; Bandwidth; Packet switching; Response time (**computer systems**); Markov processes; **Computer** simulation
Identifiers: Traffic shaping technique; Packet waiting time; Bandwidth allocation; Steady state equations; Hyperexponential distribution technique; Service distribution function; Quality of service; Traffic **contract**
Classification Codes:
722.3 (Data Communication, Equipment & Techniques); 716.1 (Information & Communication Theory); 922.1 (Probability Theory); 723.5 (Computer Applications)
722 (Computer Hardware); 716 (Radar, Radio & TV Electronic Equipment) ; 922 (Statistical Methods); 723 (Computer Software)
72 (COMPUTERS & DATA PROCESSING); 71 (ELECTRONICS & COMMUNICATIONS); 92 (ENGINEERING MATHEMATICS)

22/5/20 (Item 4 from file: 8) Links
Ei Compendex(R)

07711289 **E.I. No:** EIP97063678863
Title: Fuzzy adaptive connection admission control for real-time applications in ATM-based heterogenous networks

Author: Chen, Biao; Zhang, Yingbi; Yen, John; Zhao, Wei
Corporate Source: Univ of Texas at Dallas, Richardson, TX, USA
Conference Title: Proceedings of the 1996 1st Joint Conference on Intelligent Systems/ISAI/IFIS
Conference Location: Cancun, Mex **Conference Date:** 19961112-19961115
Sponsor: ITESM
E.I. Conference No.: 46418
Source: Mexico-USA Collaboration in Intelligent Systems Technologies Proceedings of the Joint Conference on Intelligent Systems/ISAI/IFIS 1996. IEEE, Piscataway, NJ, USA. p 215-220
Publication Year: 1996
CODEN: 002599
Language: English
Document Type: CA; (Conference Article) **Treatment:** A; (Applications); T; (Theoretical)
Journal Announcement: 9707W4
Abstract: In this paper, we study connection-oriented service in heterogeneous network for real-time applications. Many existing distributed mission-critical systems are deployed over heterogeneous networks. Hence, it is necessary to extend the real-time communication technology to encompass heterogeneous networks. A connection can be considered as a **contract** between an application and the network: the application specifies the characteristics of the traffic which it may generate and the network agrees to provide the requested quality of service (QoS) to the application. For real-time applications, the most crucial QoS is to meet deadline requirements. We propose a fuzzy intelligent system for connection admission control (CAC). Upon a request of connection establishment, the CAC determines if the worst case delays of the requesting and existing connections can be satisfied given the available network resources. If so, the CAC allocates appropriate network resources to the requesting connection. Our system uses fuzzy logic to capture the knowledge for adapting its strategy to dynamic system status. The parameters in fuzzy logic rule can be identified using genetic algorithms. Our approach is compatible with current network standards and hence can be readily used in practical systems. (Author abstract) 11 Refs.
Descriptors: ***Adaptive** control **systems**; **Real time** systems; Asynchronous transfer mode; Distributed **computer systems**; Fuzzy control; Learning systems; Electric delay lines; Genetic algorithms; Standards; Telecommunication traffic
Identifiers: Connection admission control (CAC); Quality of service (QOS)
Classification Codes:
731.1 (Control Systems); 722.4 (Digital Computers & Systems); 723.4 (Artificial Intelligence); 723.5 (Computer Applications); 706.2 (Electric Power Lines & Equipment)
731 (Automatic Control Principles); 722 (Computer Hardware); 723 (Computer Software); 706 (Electric Transmission & Distribution); 921 (Applied Mathematics)
73 (CONTROL ENGINEERING); 72 (COMPUTERS & DATA PROCESSING); 70 (ELECTRICAL ENGINEERING); 92 (ENGINEERING MATHEMATICS)

22/5/29 (Item 3 from file: 23) Links
Fulltext available through: STIC Full Text Retrieval Options

0007575415 IP Accession No: 200609-25-045452

A QoS-provisioning neural fuzzy connection admission controller for multimedia high-speed networks

Cheng, Ray-Guang; Chang, Chung-Ju; Lin, Li-Fong
IEEE/ACM Transactions on Networking , v 7 , n 1 , p 111-121 , Feb. 1999
Publication Date: 1999
Publisher: Institute of Electrical and Electronics Engineers, Inc. , 445 Hoes Ln , Piscataway , NJ , 08854-1331
Country Of Publication: USA
Publisher Url: http://ieee.org
Publisher Email: inspec@ieee.org

Document Type: Journal Article
Record Type: Abstract
Language: English
ISSN: 1063-6692
Electronic Issn: NO
DOI: 10.1109/90.759332
File Segment: Computer & Information Systems Abstracts

Abstract:
This paper proposes a neural fuzzy approach for connection admission control (CAC) with QoS guarantee in multimedia high-speed networks. Fuzzy logic systems have been successfully applied to deal with traffic-control-related problems and have provided a robust mathematical framework for dealing with real-world imprecision. However, there is no clear and general technique to map domain knowledge on traffic control onto the parameters of a fuzzy logic system. Neural networks have learning and adaptive capabilities that can be used to construct intelligent computational algorithms for traffic control. However, the knowledge embodied in conventional methods is difficult to incorporate into the design of neural networks. The proposed neural fuzzy connection admission control (NFCAC) scheme is an integrated method that combines the linguistic control capabilities of a fuzzy logic controller and the learning abilities of a neural network. It is an intelligent implementation so that it can provide a robust framework to mimic experts' knowledge embodied in existing traffic control techniques and can construct efficient computational algorithms for traffic control. We properly choose input variables and design the rule structure for the NFCAC controller so that it can have robust operation even under dynamic environments. Simulation results show that compared with a conventional effective-bandwidth-based CAC, a fuzzy-logic-based CAC, and a neural-net-based CAC, the proposed NFCAC can achieve superior system utilization, high learning speed, and simple design procedure, while keeping the QoS **contract**

Descriptors: Mathematical models; Fuzzy logic; Mathematical analysis; Computer simulation; Traffic control; Learning; Fuzzy; Neural networks; Fuzzy set theory; Joints; Design engineering; High speed; Construction; Networks; **Dynamics**; Multimedia; Algorithms; Admission control; Computation; **Adaptive** control **systems**
Subj Catg: 25, **Computer** Communication **Networks**

22/5/30 (Item 4 from file: 23) **Links**
Fulltext available through: STIC Full Text Retrieval Options

0007435685 IP Accession No: 200609-20-056487; 200609-25-046445; 200609-53-182549
A distributed dynamic resource allocation for a hybrid TDMA/CDMA system

Ortigoza-Guerrero, L; Aghvami, A H
IEEE Transactions on Vehicular Technology , v 47 , n 4 , p 1162-1178 , Nov. 1998
Publication Date: 1998
Publisher: INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS INC , 445 Hoes Ln. , Piscataway , NJ , 08854-1331
Country Of Publication: USA
Publisher Url: http://www.ieee.org
Publisher Email: subscription-service@ieee.org

Document Type: Journal Article
Record Type: Abstract
Language: English
ISSN: 0018-9545
Electronic Issn: NO
DOI: 10.1109/25.728505
File Segment: Mechanical & Transportation Engineering Abstracts; Computer & Information Systems Abstracts; Electronics & Communications Abstracts

Abstract:
A distributed dynamic resource allocation (DDRA) strategy for a hierarchical cellular structure (HCS) is proposed. In the DDRA, resources are shared not only between cells of the same hierarchy, but between layers. The proposed DDRA strategy is evaluated using the hybrid time-division multiple-access/code-division multiple-access (TDMA/CDMA) **proposal** made in the future radio wide-band multiple-access system (FRAMES) Project Mode I (FMI) as a case study. A mixed environment is suggested for the evaluation of the DDRA, which consists of Manhattan-like microcells covered by hexagonal-shaped umbrella cells (macrocells). Users are classified according to their speed as slow- and fast-moving users and are attended to by the most suitable layer of the hierarchy according to their speeds. Two types of real-time circuit-switched services are considered in the evaluation: speech and data at different rates. The DDRA is compared with the fixed resource allocation (FRA) strategy with overflow and with FRA with overflow, handdown, and channel reallocations (FRANR)

Descriptors: Dynamical systems; **Dynamics**; Resource **allocation**; Strategy; Hierarchies; Code division multiple access; Channels; Speech; Cellular structure; Circuits; Real time; Frames; Radio; Covering; **Proposals**
Subj Catg: 20, Automotive Engineering (General); 25, **Computer** Communication **Networks**; 53, Radio Communications

22/5/43 (Item 2 from file: 95) Links
TEME-Technology & Management

00939967 E95114127022

Flow management in a quality of service architecture

(Eine Transportschicht fuer Multimedia- und Echtzeitanwendungen)

Campbell, A; Coulson, G; Hutchison, D
Lancaster Univ., GB

High Performance Networking, V, Proc. of the IFIP TC6/WG 6.4 5th Internat. Conf., Grenoble, F, Jun 27 - Jul 1, 1994 , 1994
Document type: Conference paper **Language:** English
Record type: Abstract
ISBN: 0-444-82023-X

Abstract:
Quality of Service (QoS) in distributed systems supporting real-time and multimedia applications must be guaranteed system-wide, including end-systems, communications systems and networks. This paper concentrates primarily on the transport layer of such a system but also describes a generalised Quality of Service Architecture (QoS-A) used to specify and implement application defined QoS over all architectural layers. The central QoS-A concepts are flow, service **contract** and flow management. A flow is a unidirectional end-to-end data stream with a specific QoS requirement. Service **contracts** are binding agreements between users and providers at each architectural level involved in a flow. Flow management provides for the monitoring and maintenance of the contracted QoS levels of a flow over all layers. The paper first describes an enhanced transport service which permits extremely flexible QoS configuration for real-time and multimedia transport users. Subsequently, it shows how flow management concepts and mechanisms can ensure that QoS levels contracted at the transport service interface are maintained by the lower layers - i.e. the supporting network and operating system infrastructures. The work is placed in the wider context of a local ATM environment in which the QoS-A is currently being implemented.

Descriptors: DISTRIBUTED PARAMETER SYSTEMS; **REAL TIME** METHOD; **SYSTEM** ARCHITECTURE; DATA FLOW; **CONFIGURATION**; **COMPUTER INTERFACES**; **NETWORKS**--CIRCUITS; OPERATING SYSTEM-- **COMPUTERS**; COMMUNICATION **NETWORKS**; PROTOCOLS; QUALITY
Identifiers: TRANSPORTSCHICHT; Kommunikationsnetz; verteiltes System; Protokoll

22/5/53 (Item 6 from file: 266) Links
FEDRIP

00415478
Identifying No.: 9985129 **Agency Code:** NSF
CAREER: An Architecture for Building Dynamic, Adaptive Systems

Principal Investigator: Joseph, Anthony D
Performing Org.: University of California-Berkeley, EECS, CS Division , Berkeley , CA 94720-1776
Project Monitor: Sollins, Karen R.
Sponsoring Org.: National Science Foundation, ANI , 4201 Wilson Boulevard , Arlington , Virginia 22230

Dates: 20000701 **To** 20040630 **Fy :** 2000 **Funds:** $1,999,850 (1000000)
Summary: This is an.NSF CAREER/PECASE grant **proposal** for research into a new Architecture for wide-area, **Dynamic Adaptive Systems** (ADAS). The decreasing cost of computing and networking technology and **network**-enabled **devices** is enabling the large-scale deployment of a wide-area infrastructure that operas many new and innovative services (e.g., a service that allows a user to control the lights in a room). Unfortunately, wide-area network deployment has not yielded the expected improvements in access to new and existing **devices**, services, and **networks**. Each of these areas faces significant problems: end devices that are more powerful than earlier generations, but are still very limited and fragile relative to their fixed counterparts; many services are developed with the static assumption of high-bandwidth and low-latency networks and thus perform poorly in the low bandwidth, high-latency wide-area environment; networks that have different capabilities (e.g., bandwidth, latency, cost, coverage) making reconciliation of these differences difficult for many services. This CAREER grant **proposal** addresses two key problems of wide-area services: (1) Dynamically adapting to the current conditions and environment at each level of the service and network, and (2) Locating the appropriate service for a task. Adaptive systems are a necessary response to the significant performance problems associated with accessing services in the wide-area. A **dynamically adaptive system** continually **changes** based upon changing conditions at multiple levels: link, network, and service, yielding a significant improvement in the perfor- mance and usability of services. Most networks make a fixed tradeoff between reasonable performance under worst-case conditions and performance under best-case conditions. However, for a fixed design point, best-case performance usually suffers. Previous research efforts have primarily focused on only one aspect of adaptation. What makes this grant **proposal** unique is a plan for developing a new architecture that supports novel, dynamically adaptive services and enables anywhere, anytime, any mode access to services. The first step is to produce software tools, applied theoretical and simulation results, and an experimental testbed, all of which will aid researchers working with new models for wide-area service construction, deployment, and access. The second step is to use more mature versions of these tools in a large-scale experiment focused on two areas: improving the undergraduate and graduate academic experience in two courses and providing new undergraduate research opportunities in the intersection between mobile computing, wireless networking, and wireless telephony. This work builds upon the our research in the following areas: (1) Information Exposure and Multi-level Dynamic Adaptation. A key enabler for adaptation is the exposure of metadata between link, network, and service levels (e.g., a service can inform the link layer of its latency and reliability quirements). This technique will depend upon the development of theoretical models for the predicted state of a wireless link, upon based upon extensive experimental and simulation research. (2) Providing high-performance, wide-area access to services. The researcher strongly believes that "Access is the killer application." Decoupling user interfaces from communication and dynamic adaptation are the keys to delivering high-performance. (3) Large-Scale Deployment of Wide-Area Information Access. An important component of the research is conducting large-scale testbed experiments in both research and academic settings. Graduate and undergraduate students will be included in the project's research by leveraging the significant hardware and software testbed being deployed by related projects at UC Berkeley. These research directions will work together in a synergistic fashion, where theoretical, analytical

[File 9] **Business & Industry(R)** Jul/1994-2008/Feb 13

[File 13] **BAMP** 2008/Mar W5

[File 15] **ABI/Inform(R)** 1971-2008/Feb 14

[File 16] **Gale Group PROMT(R)** 1990-2008/Feb 13

**File 16: Because of updating irregularities, the banner and the update (UD=) may vary.*

[File 20] **Dialog Global Reporter** 1997-2008/Feb 15

[File 47] **Gale Group Magazine DB(TM)** 1959-2008/Feb 07

[File 75] **TGG Management Contents(R)** 86-2008/Jan W3

[File 88] **Gale Group Business A.R.T.S.** 1976-2008/Jan 28

[File 98] **General Sci Abs** 1984-2008/Jan

[File 141] **Readers Guide** 1983-2008/Nov

[File 148] **Gale Group Trade & Industry DB** 1976-2008/Jan 30

**File 148: The CURRENT feature is not working in File 148. See HELP NEWS148.*

[File 160] **Gale Group PROMT(R)** 1972-1989

[File 275] **Gale Group Computer DB(TM)** 1983-2008/Feb 11

[File 369] **New Scientist** 1994-2007/Sep W4

[File 370] **Science** 1996-1999/Jul W3

**File 370: This file is closed (no updates). Use File 47 for more current information.*

[File 484] **Periodical Abs Plustext** 1986-2008/Feb W2

[File 553] **Wilson Bus. Abs.** 1982-2008/Feb

[File 610] **Business Wire** 1999-2008/Feb 04

**File 610: File 610 now contains data from 3/99 forward. Archive data (1986-2/99) is available in File 810.*

[File 613] **PR Newswire** 1999-2008/Feb 04

File 613: File 613 now contains data from 5/99 forward. Archive data (1987-4/99) is available in File 813.

[File 621] **Gale Group New Prod.Annou.(R)** 1985-2008/Jan 30

[File 624] **McGraw-Hill Publications** 1985-2008/Feb 14

File 624: Homeland Security & Defense and 9 Platt energy journals added Please see HELP NEWS624 for more

[File 634] **San Jose Mercury** Jun 1985-2008/Feb 13

[File 635] **Business Dateline(R)** 1985-2008/Feb 15

[File 636] **Gale Group Newsletter DB(TM)** 1987-2008/Feb 13

[File 647] **CMP Computer Fulltext** 1988-2008/Jan W4

[File 674] **Computer News Fulltext** 1989-2006/Sep W1

File 674: File 674 is closed (no longer updates).

[File 696] **DIALOG Telecom. Newsletters** 1995-2008/Feb 14

[File 810] **Business Wire** 1986-1999/Feb 28

[File 813] **PR Newswire** 1987-1999/Apr 30

[File 476] **Financial Times Fulltext** 1982-2008/Feb 15

;d s
Set Items Postings Description
S1 34277044 138206957 S SYSTEM? ? OR NETWORK? ?
S2 1154533 3015631 S S1(3N)(ADAPT? OR ADJUST? OR SELFADAPT? OR SELFADJUST? OR MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHANG??? OR CONFIGUR? OR RECONFIGUR? OR ALLOCAT? OR REALLOCAT?)
S3 54242 195365 S S2(5N)(DYNAMIC? OR ON()FLY OR AUTOMAT? OR REAL()TIME)
S4 15533965 36307122 S CONTRACT? ? OR (SERVICE OR QOS)(2N)AGREEMENT? ? OR SLA OR PROPOSAL? ? OR PACT? ?
S5 4330512 13641515 S S1(3N)(COMPONENT? ? OR MEMBER? ? OR DEVICE? ? OR MACHINE? ? OR CLIENT? ? OR SERVER? ? OR COMPUTER? ? OR INTERCOMPONENT?)
S6 58475 199725 S S5(3N)(INTERACT? OR RELATIONSHIP? OR EXCHANG? OR NEGOTIAT? OR INTEROPERAT? OR INTER()OPERAT? OR INTERRELAT?)
S7 2194 11130 S S3(100N)S4
S8 2 14 S S7(100N)S6
S9 260 2071 S S7(50N)S5
S10 48704 111665 S S4(3N)(CRITERIA OR TENET? ? OR ELEMENT? ? OR CHARACTERISTIC? ? OR PARAMETER? ? OR SPECS OR SPECIFICATION? ?)

S11	27	154	S S3(100N)S10
S12	17	96	RD (unique items)
S13	17	96	S S12 NOT S8
S14	10	52	S S13 NOT PY=2001:2008

14/3,K/1 (Item 1 from file: 15) **Links**
ABI/Inform(R)

01955388 46486528
What makes the difference?

Anonymous
Communications News v36n11 pp: 46-48
Nov 1999
ISSN: 0010-3632 **Journal Code:** CNE
Word Count: 1578
Text:

...make it even easier to analyze network performance. Eventually, it will be possible for test **systems** to trigger **automatic adjustments** to the **network** to prevent many problems and shutdowns from ever occurring.

Why RDT?

Most service providers offer service-level agreements (SLAs) and, unless the **parameters** of an **SLA** are verified, customers may not really be receiving the full benefits of the service offering...

14/3,K/4 (Item 1 from file: 20) **Links**
Dialog Global Reporter

04914501 **(USE FORMAT 7 OR 9 FOR FULLTEXT)**
NORTEL NETWORKS: Bell Atlantic & Nortel Networks sign agreements with potential value of US$1 billion

M2 PRESSWIRE
April 09, 1999
Journal Code: WMPR **Language:** English **Record Type:** FULLTEXT
Word Count: 1250
(USE FORMAT 7 OR 9 FOR FULLTEXT)

...service, future-looking, end-to-end solution."
"We understand the challenge facing our customers to **dynamically reconfigure** their **networks** to handle the explosive growth of data, while at the same time leverage the investment...

...integrate and provide the core infrastructure of these next generation IP networks. The key hardware **elements** of this **contract** are Nortel Networks' new scalable XA Core processor; and the DMS SuperNode Data Manager for...

[File 347] **JAPIO** Dec 1976-2007/Oct(Updated 080129)

**File 347: File Histories now available for ordering when searching via DialogLink 5 and Web products, see HELP FILEHIST for more information.*

[File 350] **Derwent WPIX** 1963-2008/UD=200811

**File 350: Chinese Utility Model registrations in English now available To order File Histories, see HELP FILEHIST for details.*

```
; d s
Set   Items   Postings   Description
S1        1          2   S AU=(BENZINGER L? OR BENZINGER, L?)
S2       11         37   S AU=(FEIERTAG R? OR FEIERTAG, R?)
S3       46        112   S AU=(RHO J? OR RHO, J?)
S4        0          0   S S1 AND S2 AND S3
S5        6         21   S S1:S3 AND IC=G06F
```

inventor search

5/5/6 (Item 6 from file: 350) **Links**
Fulltext available through: Order File History
Derwent WPIX

0014291034
WPI Acc no: 2004-477706/200445
XRPX Acc No: N2004-376427
Security service provider management method involves detecting security-related event when secure communication is established using security service provider, in order to select another suitable service provider
Patent Assignee: NETWORKS ASSOC TECHNOLOGY INC (NETW-N)
Inventor: COHEN E L; **FEIERTAG R J**; REDMOND T; **RHO J**; ROSSET S T; THOMAS R

Patent Family (1 patents, 1 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 6757822	B1	20040629	US 2000586558	A	20000531	200445	B

Priority Applications (no., kind, date): US 2000586558 A 20000531

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 6757822	B1	EN	12	7	

Alerting Abstract US B1
NOVELTY - A security service provider is selected to provide a secure communication between the applications. A security-related event such as run-time error is detected during secure communication. Another security service provider is selected when security-related event is detected, and the selected service provider is executed on the host different from the host of other service providers.
DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

30. computer program product for managing use of security service providers; and
31. security service provider management system.

USE - For managing use of security service provider for providing secure network communication between the applications.
ADVANTAGE - Improves the fault tolerant capability and flexibility, by dynamically changing the service providers.
DESCRIPTION OF DRAWINGS - The figure shows a schematic view of the secure communication system.

[File 2] **INSPEC** 1898-2008/Jan W2

[File 6] **NTIS** 1964-2008/Feb W3

[File 8] **Ei Compendex(R)** 1884-2008/Jan W4

[File 23] **CSA Technology Research Database** 1963-2008/Jan

[File 34] **SciSearch(R) Cited Ref Sci** 1990-2008/Feb W3

[File 35] **Dissertation Abs Online** 1861-2007/Oct

[File 65] **Inside Conferences** 1993-2008/Feb 14

[File 95] **TEME-Technology & Management** 1989-2008/Feb W1

[File 99] **Wilson Appl. Sci & Tech Abs** 1983-2008/Jan

[File 111] **TGG Natl.Newspaper Index(SM)** 1979-2008/Jan 29

[File 144] **Pascal** 1973-2008/Feb W1

[File 256] **TecInfoSource** 82-2008/Dec

[File 266] **FEDRIP** 2007/Nov

[File 434] **SciSearch(R) Cited Ref Sci** 1974-1989/Dec

[File 239] **Mathsci** 1940-2008/Feb

[File 474] **New York Times Abs** 1969-2008/Feb 14

[File 475] **Wall Street Journal Abs** 1973-2008/Feb 14

[File 583] **Gale Group Globalbase(TM)** 1986-2002/Dec 13

**File 583: This file is no longer updating as of 12-13-2002.*

;d s

Set	Items	Postings	Description
S1	20	20	S AU=(BENZINGER L? OR BENZINGER, L?)
S2	109	109	S AU=(FEIERTAG R? OR FEIERTAG, R?)

S3	1037	1038	S AU=(RHO J? OR RHO, J?)
S4	0	0	S S1 AND S2 AND S3
S5	17	68	S S1:S3 AND (DYNAMIC? OR ADAPT?)(3N)(NETWORK? OR SYSTEM?)
S6	7	27	RD (unique items)

6/5/2 (Item 2 from file: 2) **Links**
INSPEC

09539568 **INSPEC Abstract Number:** C2005-09-6170-060
Title: Policy migration in large agent-based systems
Author Feiertag, R.; **Rho, J.**; Redmond, T.
Author Affiliation: Cougaar Software, Inc., Mountain View, CA, USA
Conference Title: 2005 International Conference on Integration of Knowledge Intensive Multi-Agent Systems (IEEE Cat. No.05EX1033) p. 103-8
Editor(s): Thompson,C.; Hexmoor,H.
Publisher: IEEE , Piscataway, NJ, USA
Publication Date: 2005 **Country of Publication:** USA xi+643 pp.
ISBN: 0 7803 9013 X **Material Identity Number:** XX-2005-00671
U.S. Copyright Clearance Center Code: 0 7803 9013 X/2005/$20.00
Conference Title: 2005 International Conference on Integration of Knowledge Intensive Multi-Agent Systems
Conference Sponsor: IEEE Boston Sect
Conference Date: 18-21 April 2005 **Conference Location:** Waltham, MA, USA

Language: English **Document Type:** Conference Paper (PA)
Treatment: Practical (P)
Abstract: The Cougaar agent architecture provides mechanisms for implementing a scalable, survivable system. Policy is the primary means for coordinating and controlling many of the defensive mechanisms of the Cougaar infrastructure. Policy also provides the primary means by which the **system adapts** and responds to changing conditions and attacks. We describe the policy mechanism in Cougaar and how it is used in defending the system. We describe several issues in scaling the policy mechanism to large agent societies and how we addressed these issues in Cougaar. We also describe some remaining issues and possible approaches to addressing these. (4 Refs)
Subfile: C
Descriptors: multi-agent systems; security of data; software agents
Identifiers: policy migration; agent based systems; Cougaar agent architecture; Cougaar infrastructure; **system adaptation**; system defense; agent societies; defensive mechanisms
Class Codes: C6170 (Expert systems and other AI software and techniques); C6130S (Data security)

6/5/4 (Item 2 from file: 8) **Links**
Fulltext available through: STIC Full Text Retrieval Options

08673926 **E.I. No:** EIP00095348138
Title: Intrusion detection inter-component adaptive negotiation

Author: Feiertag, Richard; Rho, Sue; **Benzinger, Lee**; Wu, Stephen; Redmond, Timothy; Zhang, Cui; Levitt, Karl; Peticolas, Dave; Heckman, Mark; Staniford, Stuart; McAlerney, Joey
Corporate Source: NAI Labs at Network Associates, Inc, Santa Clara, CA, USA
Source: Computer Networks v 34 n 4 Oct 2000. p 605-621
Publication Year: 2000
CODEN: CNETDP **ISSN:** 1389-1286
Language: English
Document Type: JA; (Journal Article) **Treatment:** T; (Theoretical)
Journal Announcement: 0011W4
Abstract: The intrusion detection inter-component adaptive negotiation (IDIAN) project has developed a negotiation protocol to allow a distributed collection of heterogeneous intrusion detection (ID) components to inter-operate and reach agreement on each other's ID information processing capabilities and needs. The negotiation, moreover, is dynamic, so the information generated and processed can evolve as the intrusion detection system (IDS) evolves and as the environment changes. This paper describes IDIAN extensions to the common intrusion specification language (viz., GIDO filters), the negotiation protocol itself, a load model used to measure computing load on a system due to the use of ID services, and a demonstration of the protocol. (Author abstract) 9 Refs.
Descriptors: *Distributed computer systems; **Network** protocols; Computer architecture; **Adaptive** filtering; Security of data; Data privacy; Data structures; Signal detection
Identifiers: Intrusion detection inter-component adaptive negotiation (IDIAN); Heterogeneous intrusion detection
Classification Codes:
722.4 (Digital Computers & Systems); 723.2 (Data Processing); 716.1 (Information & Communication Theory)
722 (Computer Hardware); 723 (Computer Software); 716 (Radar, Radio & TV Electronic Equipment)
72 (COMPUTERS & DATA PROCESSING); 71 (ELECTRONICS & COMMUNICATIONS)